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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,437	03/19/2004	Ronald G. Gabbard	12188	7274

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EXAMINER

COLE, ELIZABETH M

ART UNIT PAPER NUMBER

1771

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/804,437

Applicant(s)

GABBARD ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,15-27,36-41 is/are pending in the application.
- 4a) Of the above claim(s) 36-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,15-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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1. Newly submitted claims 36-41 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The new claims are drawn to a different statutory category of invention since they recite methods of using the product rather than methods of making the claimed product.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 36-41 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-7, 12, 15- 22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn, U.S. Patent No. 5,985,943 in view of GB 1,0112,277. . Hahn discloses a method of applying a polymeric wax to an expanded polystyrene bead comprising the steps of providing the bead, expanding the bead and applying the wax to the bead. See col. 1, lines 56-62 and col. 2, lines 15-33. Note that Hahn teaches that the wax can be applied to prefoamed EPS beads in line 31 of col. 2, and that the wax can be in the form of an aqueous emulsion and can be applied by spraying or mixing

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the beads and emulsion. Hahn further teaches that the polystyrene expanded beads can be placed into molds and molded to form molded articles. Hahn differs from the claimed invention because Hahn does not disclose applying a polyethylene wax as the polymeric wax. GB '277 teaches that polyethylene wax is suitable for use as a coating agent for polystyrene beads and that polyethylene wax is equivalent to paraffin wax, which is the preferred wax of Hahn. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed polyethylene wax instead of paraffin wax, motivated by the teaching of GB '277 that polyethylene wax was recognized as equivalent to paraffin wax. With regard to coating the formed polymeric foam material with the wax composition, since Hahn teaches that the wax can be applied to the foam in order to render the foam hydrophobic and teaches that the wax does not prevent or impair bonding, it would have been obvious to have applied additional coatings of the wax to the formed foam body, motivated by the expectation that this would further enhance the hydrophobicity of the foam article, which is taught by Hahn as being a desirable property. See col. 1, lines 7-25. With regard to claim 36-41, since Hahn teaches that the materials can be used as building materials, the formed materials would be placed in contact with other surfaces. Further, with regard to claims 37 and 39, it would have been obvious to have packaged the foamed building materials of Hahn with other materials so that the materials could be used together.

4. Claims 8-11,23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn in view of GB '277 as applied to claims above, and further in view of

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Gabbard et al, U.S. Patent No. 6,646,018. Hahn discloses a method of making coated expanded polystyrene beads as set forth above. Hahn differs from the claimed invention because it does not disclose placing the beads in a mesh bag after forming and does not disclose the particulars of the blowing agent employed. Gabbard et al teaches at col. 3, lines 2-15 that expanded polystyrene beads can be placed in mesh bags after initial expansion in order to age and allow residual blowing agent to leave the beads and for air to equilibrate across the bead. Gabbard also teaches that generally the beads are heated to a temperature above the boiling point of the blowing agent in order to effect the foaming of the beads. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the particular additional method steps of placing the beads in mesh bags and aging them as taught by Gabbard, motivated by the teaching of Gabbard that this process allows the excess blowing agent to leave the beads and air to equilibrate in the beads and it further would have been obvious to have employed and heated the blowing agent to temperatures above the boiling point motivate by the teaching of Gabbard that this was conventionally done in order to form the expanded beads.

5. Applicant's arguments filed 6/13/06 have been fully considered but they are not persuasive. Applicant argues that there is no motivation to combine the two references and that GB '277 does not teach the equivalency of the paraffin wax and the polyethylene wax. However, GB '277 states "The other essential constituent is the wax, and this is preferably one having a melting point less than the softening point of the polystyrene, for example a melting point between 50C and 85C, such as about 70C. A

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wide range of waxes can be used, including for example beeswax, paraffin wax, ozokerite, carnauba wax or a microcrystalline wax, and excellent results have been obtained using a polyethylene wax.” Therefore, it is clear that GB ‘277 teaches that paraffin wax and polyethylene wax were both known in the art and recognized as suitable for the purpose of providing a coating on a foamed polystyrene article comprising foamed beads made from foamable polystyrene particles. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In re Fout, 675 F.2d 297, 213 USPQ 532 (CCPA 1982). The fact that GB ‘277 teaches that excellent results have been obtained with polyethylene wax as opposed to other waxes such as paraffin wax which are still taught as suitable for use in GB ‘277 provides even more motivation to make the substitution, since GB ‘277 teaches that while paraffin wax, as used in Hahn, is suitable for use, polyethylene wax provides excellent results. Further, it is noted that references are prior art for all that they teach. GB ‘277 may prefer polyethylene wax, but it teaches that other known waxes, including paraffin wax, can also be used.

6. Applicant argues that GB ‘277 is not considered with reducing water absorption as is the case with Hahn. However, col. 1, lines 36-37, teaches that a further advantage of forming the polyethylene wax coated polystyrene material is that water absorption is reduced. Therefore, GB ‘277 teaches that the use of the coated polystyrene reduces the water absorption of the foamed material. Therefore, the teachings of GB ‘277 are applicable to the invention of Hahn.

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7. Applicant argues that there were be no expectation of success in combining the two references. However, Hahn teaches every aspect of the claimed invention except that it does not teach the particularly claimed wax. GB '277 teaches that the particularly claimed wax is recognized as an equivalent coating material for polystyrene foam formed from foamed foamable polystyrene beads. Therefore, there would be a reasonable expectation of success in using the polyethylene wax which is disclosed in GB '277 as equivalent to the paraffin wax of Hahn. This expectation of success would be even greater since GB '277 teaches that excellent results are obtained in using polyethylene wax.

8. Applicant argues that there would be no motivation to apply the polyethylene wax of GB '277 to the pre foamed beads of Hahn. However, Hahn teaches applying the wax to either the foamed beads or the pre foamed foamable beads.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

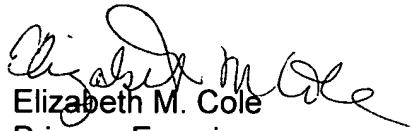
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

  
Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

e.m.c